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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,517

03/17/2004

Dennis C. Kunerth

B-355

5451

7590

05/03/2006

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EXAMINER

HOLLOWAY III, EDWIN C

ART UNIT

PAPER NUMBER

2612

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,517

Applicant(s)

KUNERTH ET AL

Examiner

Edwin C. Holloway, III

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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EXAMINER'S RESPONSE

1. In response to the application filed 3-17-04, the application has been examined. The examiner has considered the presentation of claims in view of the disclosure and the present state of the prior art. And it is the examiner's opinion that the claims are unpatentable for the reasons set forth in this Office action:

Claim Rejections - 35 USC § 102 & 103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 28 and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Padovani (US 5792337).

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Padovani discloses a monitoring method and apparatus including embedding passive wireless sensor apparatus in a structure to measure contaminants (col. 3 lines 30-54 and col. 4 lines 32-41), communicatively coupling a reader apparatus to the sensor apparatus (col. 5 lines 3-30), configuring the reader to communicate by short range telemetry (col. 5 line 9), energizing the sensor by inductive field from the passive state (col. 6 lines 32-39), monitoring infiltration and obtaining measurements (col. 3 line 44- col. 4 lines 21-32) and transmitting the measurements to the reader in a response signal superimposed on a an induction field generated by the sensor apparatus (col. 6 lines 40-58). Although RF is described, this is considered to be an inductive link in view of the 125 kHz frequency in incorporation by reference of Schuermann for the responder and reader/interrogator communicating by resonant coils.

Regarding claim 34, measurement from individual address sensors are transmitted in col. 5 lines 45-59.

Regarding claim 35, 125 kHz is disclosed in col. 5 line 9.

6. Claims 1-8, 11-13, 20-28 and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani (US 5792337) as applied above in view of Townsend (US 6529127B2).

Regarding claims 28 and 34-35, if inductive link to the sensor is not clear in Padovani, then it would have been obvious

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to one of ordinary skill in the art at the time the invention was made to have included such in Padovani in view of Townsend disclosing such for transferring power and data to sensors for structures, bridges, dams and buildings (col. 4 lines 18-20 and 49-58 and col. 11 line 22) and suggested by the inductive coupling in col. 7 line 63 of Padovani.

Regarding claims 1 and 11, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in Padovani a sensor apparatus with plural individually polled/addressable sensors in view of Padovani disclosing such (col. 7 line 59 - col. 8 line 18) to reduce power use and allow plural measurements with a single transmitter/receiver.

Regarding claims 2-3, Padovani includes stationary and mobile readers in col. 3 lines 15-17.

Regarding claims 4, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included in Padovani a processor wake a sensor to perform programmed measurements in view of Townsend disclosing such in col. 7 lines 20-35 for optimization of data sampling an tuned reader in view of Townsend disclosing such in col. 4 lines 17-37 to assure efficient power transfer.

Regarding claims 5, 21, 24, and 30 polling individual would

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have been obvious in view of col. 8 lines 6-18 of Townsend for reduced power use.

Regarding claims 6, 25 and 31, reverting to sleep upon transmitting would have been obvious in view of col. 8 lines 51-59 of Townsend for reduce power usage.

Regarding claims 7 and 33, charge for subsequent cycle would have been obvious in view of Padovani charging prior to measurement.

Regarding claim 8, 20 and 271, 125 kHz is disclosed in col. 5 line 9 of Padovani.

Regarding claim 12, the sensors of Padovani and Townsend are inactive until powered by the interrogator/reader field.

Regarding claim 13, the reader limitations are provided by fig. 6 of Padovani and fig. 1 of the incorporated Schuermann (US 5053774).

Regarding claims 22 and 32, the storage device of Padovani and Townsend continue to accumulate charge during at least part of the measuring because the power storage remains connected to the antenna/coil.

Regarding claim 23, the storage device of Padovani (col. 6 line 20-25) and Townsend (col. 5 line 28) are capacitors.

Regarding claim 26, measurement from individual address sensors are transmitted in col. 5 lines 45-59 of Padovani.

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7. Claims 9-10, 14-19 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani (US 5792337) in view of Townsend (US 6529127B2) as applied above and further in view of Anders (US 4656463).

Anders discloses a passive responder with a capacitor bank 102 in fig. 7 and cols. 10 and 26-27 to provide increased power when needed. Regarding claims 9, and 29, a capacitor bank would have been obvious in view of Anders to provide additional power when needed. Regarding claims 10 and 14-19, plural capacitor banks would have been obvious to provide further power storage in view of Fig. 7 of Anders showing additional power sources units and daisy chained components and excess capacitance in col. 10 to compensate or short discharge time of capacitors.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Spillman (US 5440300A and Khorrami (US 5970393A) disclose smart structures. Akiyama (US 5745049) and Watters (US 6617963B1 and US 6806808B1) discloses wireless interrogation of plural sensors.

CONTACT INFORMATION

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact an Electronic Business Center (EBC) representatives at 703-305-3028 or toll free at 866-217-9197 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at ebc@uspto.gov. The Patent EBC is a complete customer service center that supports all Patent e-business products and service applications. Additional information is available on the Patent EBC Web site at <http://www.uspto.gov/ebc/index.html>.


Any inquiry of a general nature should be directed to the Technology Center 2600 receptionist at (571) 272-2600.

Facsimile submissions may be sent via central fax number 571-273-8300 to customer service for entry by technical support staff. Questions related to the operation of the facsimile system should be directed to the Electronic Business Center at (866) 217-9197. On July 15, 2005, the Central FAX Number will change to.

CENTRALIZED DELIVERY POLICY: For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies. For example, if the examiner has rejected claims in a regular U.S. patent application, and the reply to the examiner's Office action is desired to be transmitted by facsimile rather than mailed, the reply must be sent to the Central FAX Number. Inquiries concerning only hours and location of the Customer Window may be directed to OIPE Customer Service at (703) 308-1202.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edwin C. Holloway, III whose telephone number is (571) 272-3058. The examiner can normally be reached on M-F (8:30-5:00). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308.

EH
4/30/06


EDWIN C. HOLLOWAY, III
PRIMARY EXAMINER
ART UNIT 2612